

I feel compelled
to write . . .

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Space News ROUNDUP!

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Nichevo I

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MANNED SPACECRAFT CENTER, HOUSTON, TEXAS

APRIL 1, 1966



Edward H. White

Virgil I. Grissom

Roger B. Chaffee



James A. McDivitt

David R. Scott

Russell L. Schweikart

First Manned Apollo Flight Crew Selected

Crewmen for the first manned Apollo mission last week were named at MSC. Prime crew is Virgil I. "Gus" Grissom, Edward H. White II, and Roger B. Chaffee. Backup crewmen are James A. McDivitt, David B. Scott and Russell L. Schweikart.

Grissom was pilot of the second manned Mercury sub-orbital flight (MR-4) and command pilot of the first manned Gemini mission, Gemini III. McDivitt and White were command pilot and pilot respectively, of the Gemini IV mission in which White accomplished the first United States extravehicular activity. David Scott was pilot on Gemini VIII. This is the first crew assignment for Chaffee and Schweikart.

The first manned Apollo mission could come as early as Apollo/Saturn 204, depending on the success of the second and third Saturn IB development flights. The first Saturn IB flew successfully on February 26, 1966. Apollo/Saturn 204 is presently scheduled for the first quarter of 1967.

Mission duration of the first manned Apollo flight will be determined on an orbit-by-orbit basis for the first six orbits, then open-ended on a day-by-day basis up to 14 days maximum. Planned orbital ephemeris is an 87 nm perigee, with apogee ranging as high as 230 nm.

The major objective of the flight will be to verify space-

craft, crew and ground support compatibility. Existing stations in the Manned Space Flight Network are being equipped with Apollo communications, tracking and telemetry gear.

72-HOUR DETECTIVE JOB—

Mission Evaluation Team Lauds Quick-Thinking Gemini VIII Crew

An electrical short in the circuits controlling an Orbit Attitude and Maneuvering System (OAMS) yaw thruster has been pinpointed as the probable cause of problems forcing early termination of the mission.

Pilot error was positively ruled out following preliminary analysis of data by the Gemini VIII Mission Evaluation Team. In revealing the Team's findings, MSC Director Dr. Robert R. Gilruth commented, "In fact, the crew demonstrated remarkable piloting skill in overcoming this very serious problem and bringing the spacecraft to a safe landing."

Dr. George Mueller, NASA associate administrator for Manned Space Flight, a participant in an all-day review of the data, joined Dr. Gilruth in saluting Gemini VIII crewmen Neil Armstrong and David Scott and commended the Evaluation Team for finding the answer within 72 hours after the incident. "This will give us time to study the Gemini IX configuration and make any adjustments necessary in order to press forward with our Gemini flight test program," Mueller said.

PROBLEM SEQUENCE

Findings of the Gemini VIII Mission Evaluation Team show the following sequence of events from the time of docking with the Agena rendezvous vehicle:

The crew was given a go-ahead for docking from the

tracking ship *Rose Knot*. After docking, both vehicles were stable and all systems were operating normally. A 90-degree yaw maneuver of the docked vehicles was completed normally after the crew sent the proper digital commands to the Agena's stored program memory with the Gemini encoder.

An inertial platform parallelism check of both vehicles was then carried out and the Agena's tape recorder commanded "on". Shortly thereafter, a 25-pound OAMS yaw thruster on Gemini VIII suddenly went full on, causing a yaw/roll maneuver of both vehicles.

Since the OAMS had been powered down, the crew had no reason to suspect that it was a Gemini thruster firing. The crew maintained reasonable control of the docked vehicles, and began their trouble-shooting procedures by turning off the Agena attitude control system and powering up the Gemini OAMS.

DECISION TO UNDOCK

Various control modes and circuitry were checked, but because substantial quantities of fuel were required for control, and the crew wanted to isolate the problem to either the Agena or the Gemini, they decided to undock.

Undocking and undocking went smoothly. The crew commanded the Agena to flight-con-

trol mode to allow ground stations to resume control of the vehicle.

HIGH ROLL RATES

Immediately after undocking, Gemini VIII began to gyrate excessively, primarily about the roll axis. Roll rates approached one revolution per second and the crew realized they were approaching their threshold of tolerance to such motion.

In spite of the high roll rates, the crew disabled Gemini VIII's OAMS and activated the Reentry Control System. They slowly regained control by applying sparing pulses of the RCS thrusters. Sufficient fuel remained in the RCS to permit a normal reentry.

Prior to mission end, the crew powered up the OAMS and isolated the failure to the yaw thruster and disabled it for the rest of the flight. The OAMS was used for the remainder of orbital flight up to adapter separation.

Gemini VIII onboard tape recorder showed that the No. 8 yaw/roll OAMS thruster fired for three seconds, was off for three seconds and then started firing continuously. The taped records were dumped by telemetry to the Hawaii tracking station shortly after the crew had regained control of Gemini VIII.

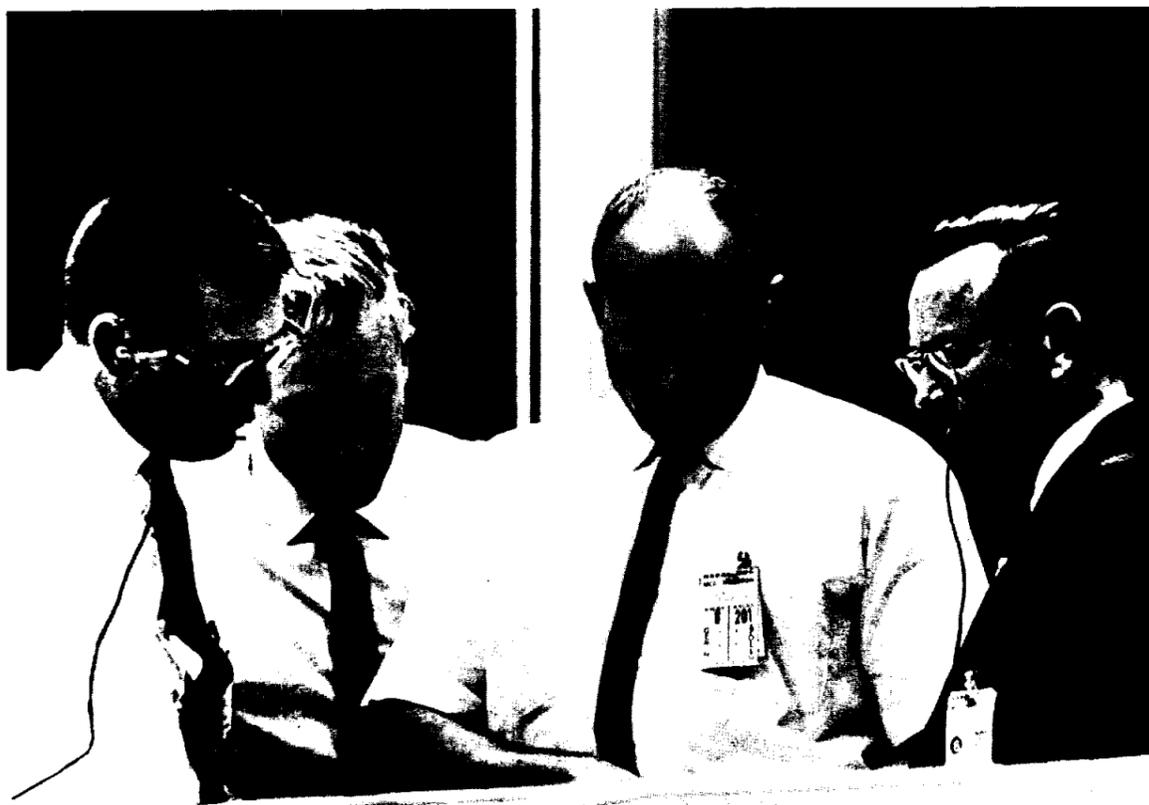
Further analysis of the onboard tapes reveal that the Gemini VIII OAMS electrical malfunction which caused the thruster to fire continuously in no way was related to commands sent to the Agena. Moreover, no command that could have been sent to the Agena could have caused subsequent events.

Gemini IX Nears GLV Hard-Mate

Gemini IX spacecraft Monday was hoisted to the Launch Complex 19 white room where cabling-up was begun for pre-mate verification tests. The spacecraft last week underwent electronic/electrical interface and interference tests—the so-called Plan X—with the Agena rendezvous vehicle for the mission.

Extravehicular equipment for the Gemini IX mission was also tested in the Plan X sequence, as was the Auxiliary Target Docking Adapter (ATDA).

The Agena currently is undergoing subsystems checkout in a hangar at Kennedy Space Center, and Gemini Launch Vehicle IX, erected March 24, was powered up Tuesday for subsystems tests.



RECOVERY HUDDLE—The recovery situation in Area 7-3 is discussed in Mission Control Center-Houston after the decision had been made to terminate the Gemini VIII mission following a thruster malfunction. Left to right are Mission Director William C. Schneider, Flight Director John D. Hodge, Recovery Coordinator Robert F. Thompson and MSC Assistant Director for Flight Operations Christopher C. Kraft, Jr.



THE FACES OF GEMINI VIII—Recognition of the joint efforts of NASA and the Department of Defense was made in an awards ceremony March 26 preceding the Gemini VIII crew press conference. Left to right, are Neil Armstrong and David Scott, Gemini VIII crewmen who received the NASA Exceptional Service Awards; Maj. Gen. Vincent G. Huston, Commander of the USAF Eastern Test Range and Deputy Manager of DOD Manned Spaceflight Support Operations, who accepted the NASA Group Achievement Award on behalf of DOD recovery forces; Rear Adm. Henry S. Persons, commander of USN Task Force 130 which includes the DD USS *Mason*; Col. Allison Brooks, commander of the USAF Aerospace Recovery and Rescue Service, Orlando, Fla.; A/2c Glenn M. Moore, SSGT Larry D. Huyett and A/1c Eldridge M. Neal, pararescue men who attached the floatation collar to Gemini VIII after parachuting from Rescue One.

Gemini Docks Easily With Agena But Stuck Thruster Ends Mission

On-time textbook launchings of the Agena rendezvous vehicle and the Gemini VIII spacecraft 101 minutes later March 16 had the portent of another nominal Gemini mission.

"The launch itself," said Gemini VIII command pilot Neil Armstrong, "has to be described as perhaps one of the greatest thrills that can ever be encountered by a pilot. The launch vehicle performance was flawless. We had a slight amount of vibration during the early phases of the flight until we became supersonic, and the ride was extremely smooth from then on."

Gemini VIII was launched into an orbit with an 87 nm perigee and a 147 nm apogee—within one nautical mile of the ephemeris desired. Mission Control gave Gemini VIII a go for rendezvous after fourth apogee.

Maneuvers for phasing and circularizing Gemini VIII's orbit went according to the nominal mission plan, as did the terminal phase maneuver for transferring Gemini VIII into the same orbit as the Agena.

"We stopped at approximately two feet out from the docking cone and waited until the Cap-Com on the RKV told us that we had good telemetry—which took about two minutes—and then docked at a closing velocity of approximately three-quarters of a foot per second; approximately nine inches per second, plus or minus three," said Armstrong. "It was quite dark. We saw no electrical discharge or sparks at the time of contact as the spacecraft touched the whisker. This is what was expected. The Agena was extremely stable, very easy to maneuver around, and it was encouraging to us inasmuch as the later Gemini

program and the lunar program is so dependent on this docking concept."

After commanding a 90-degree yaw to the Agena, the Gemini VIII crew settled down for flight plan activities of the docked combination. Said pilot David Scott, "We had about a two-hour period of Agena operations and it was a sort of point-of-view; now we can sort of sit back and enjoy flying the Agena for a couple of hours and take a little nap. We turned up the lights in the cockpit, got out the books and started getting squared away for the next series of Agena maneuvers."

The crew's relaxation was short lived, for at just after seven hours elapsed time yaw and roll rates began building up in the docked combination which at first was thought to be an anomaly in the Agena's control system, since the Gemini OAMS system was powered down. By systematically checking Agena and Gemini systems and by finally undocking, the problem was isolated to the No. 8 OAMS thruster which had failed in the open position. Damping of roll/yaw rates in Gemini VIII was finally accomplished by use of the Reentry Control System.

Since mission rules require landing in the next logical planned landing area when the RCS rings have been activated, retrofire and splash data for Area 7-3 in the Western Pacific were fed to Gemini VIII from the tracking ships *Coastal Sentry* and *Rose Knot*.

"We fired retros on time," said Armstrong, "and the retrofire velocity vector was very close to that anticipated. Appreciate that this spacecraft does have lifting

capability. It really does glide back into the atmosphere, although at a very steep angle, and its impact point can be controlled by pointing the spacecraft in the proper direction during the reentry trajectory."

Armstrong continued, "After the computer appeared to be navigating correctly for the next several minutes, we committed our bank angle to the one recommended by the spacecraft computer. The view out the window is a spectacular one—the view of the ionized sheath, very high-temperature gases coming off the spacecraft, the view of the spacecraft retro adapter burning up several miles behind the spacecraft. After we put our drogue chute out at 50,000 feet, Dave read out the latitude and longitude where the computer thought we were, which was very close to what we had expected."

Within minutes after splash-down east of Okinawa, pararescue men were in the water attaching the flotation collar around Gemini VIII.

"Finally, over the horizon, after we had opened our hatches and had a good rest there," said pilot Scott, "we saw the USS *Mason* coming full bore, and I'll bet that's the fastest that destroyer has ever traveled in its 22 years of life. They came alongside and it was a matter of four or five minutes from the time we got to the bow as the ship passed by, and we were on board and the spacecraft was on board, and I want to say that it was an extremely professional operation. Those people knew what they were supposed to do and they performed rapidly and efficiently."

Flight Directors Named For Upcoming Missions

Flight director assignments for the remaining four Gemini flights and for the next three Apollo flights have been made by MSC.

Eugene F. Kranz, Glynn S. Lunney, and Clifford E. Charlesworth will direct the upcoming Gemini IX mission.

Flight directors for Gemini X, XI, and XII will be Lunney and Charlesworth.

Apollo flights 202 and 203 will be directed by John D. Hodge, with Christopher C. Kraft Jr. as his backup.

The first manned Apollo mission, which may be Apollo/Saturn 204, will be directed by the familiar team that had charge of the earlier Gemini flights, Kraft, Hodge, and Kranz.

Assignment as a flight director is in addition to the regular duties of these men within the Flight Operations Directorate.

Kraft, as assistant director for Flight Operations, is the senior operations man at MSC, and the various flight directors are responsible to him in carrying out their assignments.

Kraft, 42, was born in Phoebus, Va., and has a BS degree in aeronautical engineering from Virginia Polytechnic Institute. He began his career with government at Langley Research Center in 1945. He served as flight director on the Project Mercury flights and on the first seven Gemini flights. On the second unmanned Gemini flight (GT-2) and the first manned Gemini flight (GT-3) he also served as mission director.

Hodge, 37, was born at Leigh-on-Sea, Essex, England. He has a BS degree in engineering from the University of London. In April 1959 he joined NASA and is now chief of the Flight Control Division. He was active in the Mercury program and a flight director on Mercury/Atlas 9. He also served as flight director on Gemini flights IV through VIII.

Kranz, 32, was born in Toledo, Ohio and has a BS degree in aeronautical engineering from St. Louis University. He joined NASA in October 1960. Kranz has served as a flight director on the past five Gemini flights. His current assignment is chief of the Flight Control Operations Branch of the Flight Control Division.

Lunney, 29, was born in Old Forge, Penn. He has a BS degree in aeronautical engineering from the University of Detroit. Lunney joined NASA in 1955 as a co-op student, and the Space Task Group, MSC's predecessor, in 1959. He was flight director on the Apollo 201 flight in February of this year. His present position is chief of the Flight Dynamics Branch of the Flight Control Division.

Charlesworth, 34, was born in Redwing, Minn. He has a BS degree in physics from Mississippi College. He joined NASA in April 1962 and his current assignment is assistant chief of the Flight Dynamics Branch. During the Gemini VIII flight, he served as a flight director trainee on Hodge's shift.

Space News Of Five Years Ago

April 4, 1961—John Glenn, Virgil Grissom and Alan Shepard began a refresher course on the Aviation Medical Acceleration Laboratory centrifuge in preparation for the first manned Mercury-Redstone sub-orbital flight.

April 6, 1961—Marshall Space Flight Center announced that 1,640,000 pounds thrust was achieved in test of F-1 rocket engine thrust chamber static firing at Edwards, Calif., a record thrust for a single chamber.

United States and United Kingdom signed formal agreement covering tracking station on Canton Island.

April 10, 1961—President Kennedy requested Congress to approve legislation making the Vice President chairman of the National Aeronautics and Space Council.

April 12, 1961—USSR announced that Maj. Yuri A. Gagarin had successfully orbited the earth in a 108-minute flight in a 5-ton *Vostok* (East), the first man to make a successful orbital flight through space.

President Kennedy, in his regular press conference, stated

that "no one is more tired than I am" in seeing the United States second to Russia in the space field. "They secured large boosters which have led to their being first in *Sputnik*, and led to their first putting their men in space. We are, I hope, going to be able to carry out our efforts, with due regard for the life of the men involved, this year. But, we are behind... the news will get worse before it is better, and it will be some time before we catch up..."

April 14, 1961—In response to questioning by the House Science and Astronautics Committee, Associate NASA Administrator Seamans repeated the general estimate of \$20 to \$40 billion as the cost for the total effort required to achieve a lunar landing, that an all-out program might cost more, and that 1967 could be considered only as a possible planning date at this stage of such a complex task.

Gigantic ceremony in Red Square in Moscow honoring Maj. Yuri A. Gagarin, the first cosmonaut.

Underinflation, Flexing Can Shorten Tire Life

To most people, tires are the things that the guy at the service station pumps air into, and that always seem to get punctured way out in the toolies miles from help.

While generally taken for granted, tires are actually a portion of a car's braking, steering and power transmission system. Neglected or underinflated, tire life can be drastically shortened and thereby jeopardize the safety of a car's occupants.

Friction-generated heat caused by the combination of tire tread in contact with the pavement and the interaction of the cords and wine beads causes the rubber binder to fail. A heavily-loaded car will generate more heat at a given tire pressure than the same type car with a light load. In a like manner, underinflated tires will run much hotter than the same tires properly inflated on another car.

Excess heat can reduce a tire's strength and durability by as much as 50%, and if allowed to build up to the vulcanizing temperature of rubber, can tear a tire apart before the driver realizes what is happening.

Tire heating can be controlled by increasing air pressure when carrying a load and eliminating internal friction, or by installing oversize tires. Some of the newer cars with undersize tires can easily be overloaded at much less the actual capacity of the car.

While a soft ride may be provided by the 24-pound front-and-rear pressures recommended by most car builders, tire manufacturers recommend from four to six pounds more air in each tire, depending upon the intended load.

Both car and tire builders suggest that inflation be checked

when the tire is "cold"—standing for at least three hours or run less than a mile. Excess pressure should never be bled off when a tire is hot. While bleeding will temporarily reduce pressure, tires will then flex more and produce more tire-weakening heat.

One often-heard fallacy is that since tires pick up pressure at freeway speeds, one should start with a lower pressure than needed. Tires may gain as much as ten pounds on long fast runs, but the flexing at lower pressures is more damaging than the increased pressure.

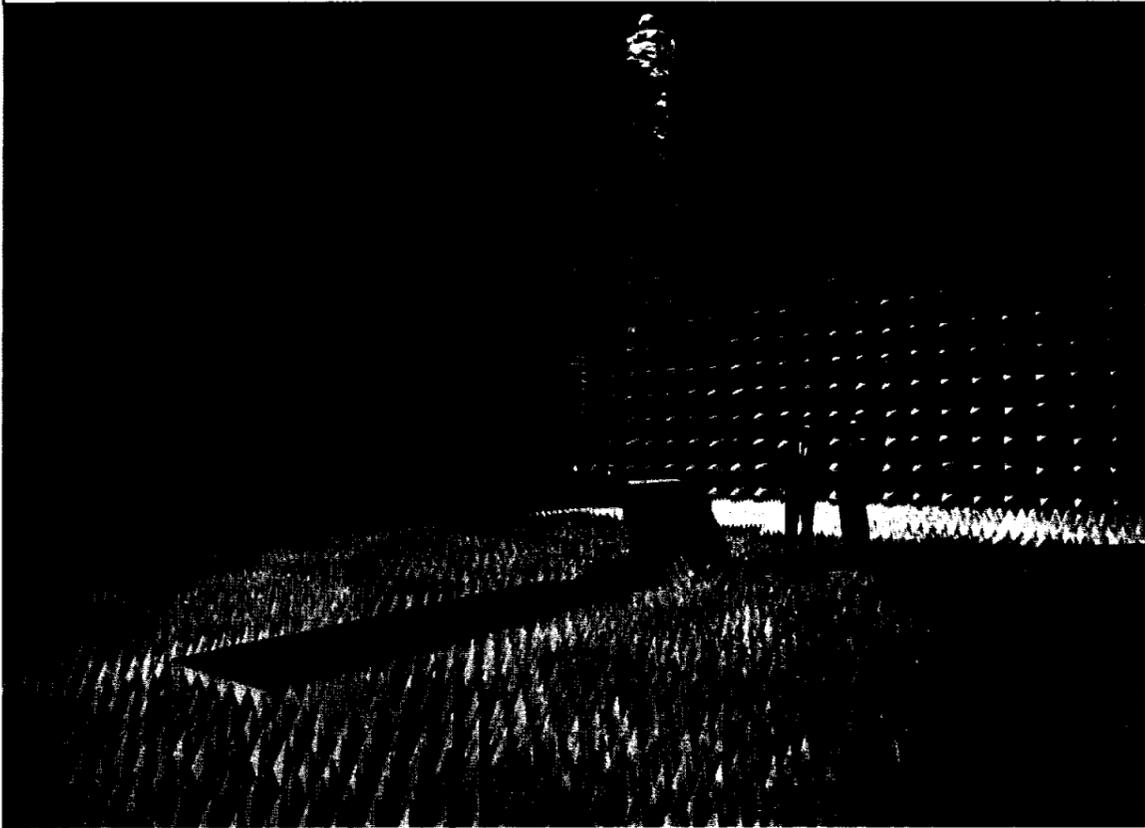
While most sound first-line tires can withstand up to 250 pounds pressure without blowing out, overinflation can also have adverse effects. For example, overinflated tires wear excessively in the center of the tread and increase the likelihood of cord breaks in that portion of the tire. Moreover, the traction area or "footprint" is reduced. Extreme overinflation gives a rough ride and makes skids more likely.

Slow-motion movie studies of a car with normally-inflated tires rounding a 125-foot radius curve at 40 mph show tires on the outside of the curve roll under the rim as far as half way up the sidewall. At lower pressures, the rim almost touched the pavement.

Tire pressures have a definite effect upon the steerability of a car, and it is for this reason that many people lose control of their cars on curves.

Today's high-performance cars and wide, straight highways are sheer punishment for tires. All drivers should minimize this punishment by inflating tires according to the load carried and by frequently checking for thin spots and breaks.

An Acre of Pyramids



SOUND SOAKER—It is literally so quiet one can hear a pin drop in the Instrumentation and Electronics Systems Division's Anechoic Chamber in Bldg. 14. The chamber's walls are completely covered with foam pyramids for absorbing stray radiation during spacecraft antenna radiation pattern tests. IESD Chief Ralph Sawyer and Stuart D. Lenett of the IESD Electromagnetic Systems Branch examine a test set-up using a dummy astronaut for lunar surface EVA antenna studies.

Faget Speaks At Space Frontier Symposium

Maxime A. Faget, MSC Assistant Director for Engineering and Development, will speak today at a day-long symposium, "Frontiers of Space," at the Oklahoma City Municipal Auditorium.

The Symposium is sponsored by the Frontiers of Science Foundation of Oklahoma, Inc. in association with NASA. More than 5000 science students from across Oklahoma were expected to attend the Symposium.

Other NASA officials appearing on the Symposium are

Deputy Administrator Dr. Robert C. Seamans; Charles Harper, Director Aeronautics Division, OART; Dr. Nancy Roman, Chief of Astronomy, Physics and Astronomy Programs

OSSA; Dr. John W. Townsend, assistant director Goddard Space Flight Center; Dr. Cyril A. Ponnampereuma, chief Chemical Evolution Branch, Ames Research Center.

FLIGHT OF NICHEVO I

USSR Lands Colonists On Venusian Surface

The Soviet Union today announced the landing of a 20-ton spacecraft on the surface of Venus carrying a crew of four cosmonauts and 16 passengers. The occupants of the *Nichevo I* spacecraft are the first contingent of colonizers to be landed on Venus under a Soviet plan of planetary expansion and colonization.

Nichevo I was launched secretly five months ago from the Soviet launch center at Baikonour by a four-stage Tolstaya-Kushka booster. Col. Vassili Apreldurak, Cosmonaut and Hero of the USSR, was *Nichevo I* spacecraft commander.

The 16 passengers—eight men and eight women—were chosen from among workers on collective farms across the Soviet Union for their robust health and pioneering spirit. Two of the cosmonauts are women. A group wedding of the ten colonist-couples was held at the Cultural Center in Magnitogorsk two days before the launch.

Colonel Apreldurak radioed shortly after the landing that the Venusian atmosphere apparently could sustain human life, and that preparations were being made to erect inflatable barracks as quarters for the colonists. "*Nichevo I*," said

Apreldurak, "now serves the colony as storage space and as a shelter should we encounter a meteor shower."

The colonists quickly adapted to the nine-tenths earth gravity of Venus, according to Apreldurak, but the high incidence of methane in the atmosphere necessitates frequent use of the nuclear-powered oxygen generator to purge the colonists' lungs. He also commented that the colonists were taking on a blanched pallor because of the planet's thick cloud cover.

In a later communique, Apreldurak reported that the new colonists had unpacked earth vegetable seeds, fruit tree seedlings, wheat and rice, and were preparing garden plots. The fresh food would be used to supplement *Nichevo I's* supply of freeze-dehydrated borsch and pirozhoki. Apreldurak reported great interest in the potato patch, since the supply of earth vodka was dwindling.

In a flash of humor Apreldurak commented, "Apparently, one can take the collective worker out of the farm, but one cannot take the farm out of the collective worker."

For students of linguistics, Colonel Apreldurak's name translated into English means ... "April Fool!"

Federal Service Recognition

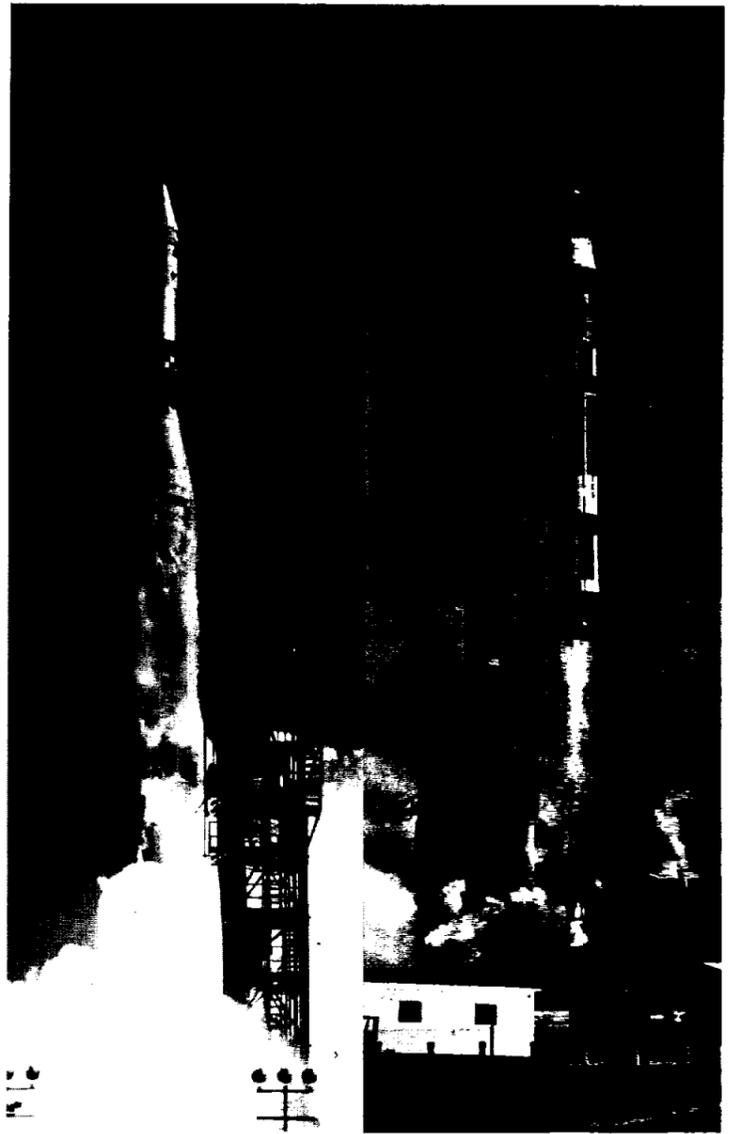


TOTAL 50 YEARS—The employees of the Public Affairs Office receive service awards from Public Affairs Officer Paul Haney, second from left. They are, left to right, John Williams, Audio Visual Branch, 20 years; Haney; Frank Hickey, Chief Protocol Branch, 15 years, and Edward Barker, Protocol Branch, 15 years.

GEMINI VIII'S SUCCESSES AND DISAPPO



CHOW TIME—Gemini VIII crewmen Neil Armstrong and David Scott breakfast on filet mignon, eggs, toast and coffee following their physical examinations and prior to suiting up for launch. In left foreground is Alan Shepard, Chief Astronaut Office; behind Scott is Astronaut Roger B. Chaffee, and Donald K. Slayton, MSC Assistant Director for Flight Crew Operations, sits at Armstrong's right.



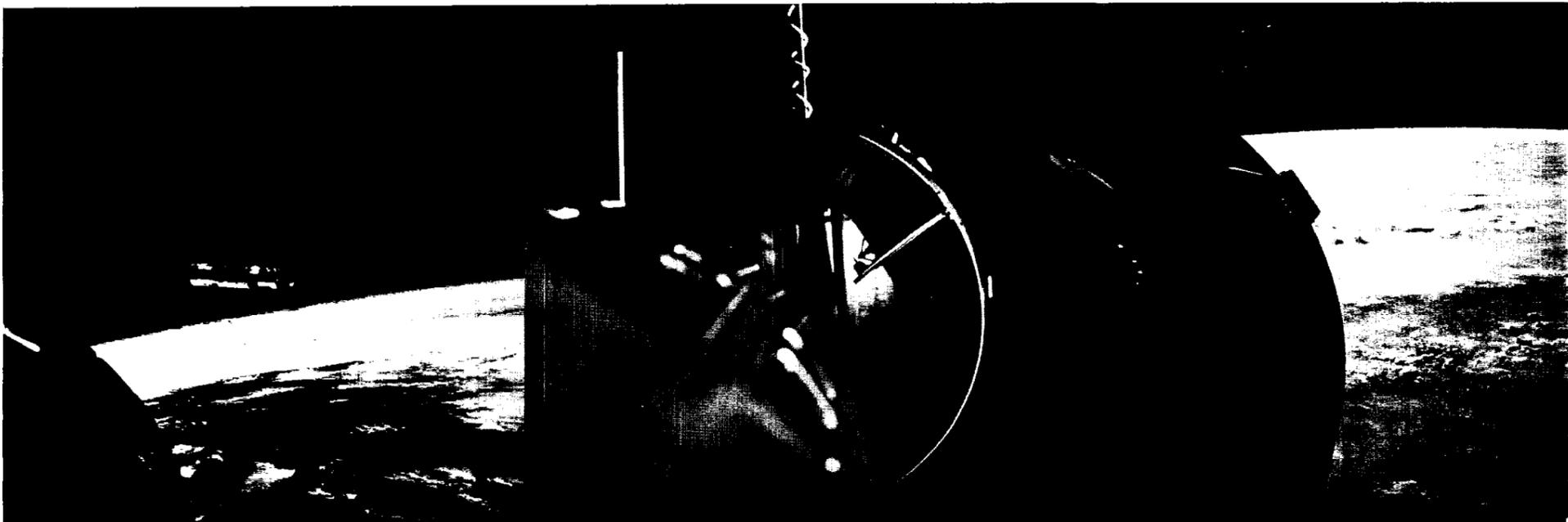
THE CHASE IS ON!—Two perfect launches—first the Atlas placing the Agena rendezvous vehicle into orbit—followed 101 minutes later by Gemini VIII—gave indications of an equally perfect mission. It was, up to a point. . . .

THE VOLCANO SEAT—Flight Directors John D. Hodge, left, and Eugene F. Kranz jointly man the Flight Director's console in Mission Control Center-Houston during the launch phase of Gemini VIII. Hodge and Kranz, flight directors of the Blue and White flight controller teams were to have alternated in 12-hour shifts during the mission.

HOLD THAT ELEVATOR—Armstrong and Scott leave the transfer van and start toward the ramp that leads to the elevator to the White Room atop Launch Complex 19. In white coveralls behind Scott is suit technician Joe W. Schmitt of Crew Systems Division, who except for two Gemini crews, has suited every flight crew including all Mercury pilots.



DOKUMENTS AS SEEN BY THE CAMERA



LIKE PARKING IN THE GARAGE . . . ALMOST—Gemini VIII's Agena rendezvous vehicle waits with bristling antennas for Armstrong and Scott to overtake it.

TWO FEET AND HOLDING—Gemini VIII kept station with the Agena at a close separation until being given a go-ahead for docking by the tracking ship *Rose Knot*.

DOCKED AND LATCHED—This was the view from Scott's window after the docking with Agena was completed. Shortly after docking, Gemini thruster problems arose.

WIFELY WATCHER—Mrs. David Scott observes flight control activities in Mission Control Center—Houston during Gemini VIII. Sitting to her left are MSC Director Dr. Robert R. Gilruth and MSC Deputy Director George Low. The lower photo shows a rear-projection display in Mission Control that is used to show relative orbital positions of two vehicles.

USS GEMINI VIII—Part-time surface vessel Gemini VIII floats on the calm surface of the Western Pacific near Okinawa awaiting pickup by the destroyer *USS Mason*. US Air Force Air Rescue Service pararescue men perch on the floatation collar. The swimmers, SSGT L. Huyett and A/1c E. N. Neal and A/2c Glenn Moore, were dropped from an aircraft commanded by Capt. Leslie G. Snyder. Armstrong and Scott boarded the *Mason* by the ship's ladder and the spacecraft was later hoisted aboard by the davit crane developed for retrieving spacecraft.



OUT OF TEXAS' PAST—

Sam Houston Caught Santa Anna In a Drowsy San Jacinto Siesta

A fortnight ago, you remember, we left Houston and his undisciplined little "army" of less than 800 men at a place called San Jacinto, 12 miles north of Clear Lake, where they faced 1500 of the enemy commanded by the tyrant Santa Anna, who called himself the Napoleon of the West. Houston had just ordered Deef Smith, the famous scout, to destroy the bridge over Vince's Bayou.

On the morning of April 21, 1836, Houston rode from one campfire to another, listening to complaints. The men were spoiling to fight, but Houston promised them nothing. Later on that morning he called the first staff meeting he had ever held, but again he said nothing and just let his subordinates argue about whether they should attack or let the enemy take the initiative.

Historians like to debate half a dozen questions about San Jacinto: Having retreated halfway across Texas, had Houston intended to fight at San Jacinto all along, or did he make the decision at the last minute? Why did he order Deef Smith to destroy the bridge? Did Deef and his six-man detail chop the bridge down or burn it? Why did Houston permit the enemy to bring up 500 reinforcements? Why did he spare Santa Anna's life and even liberate him? And who was the Yellow Rose?

Finally, early in the afternoon, Houston abruptly ordered his fermenting troops to prepare to attack.

The enemy was at siesta. At least one eminent historian believes (or professes to believe)

that Santa Anna was entertaining a woman called the Yellow Rose of Texas in his tent beside the moss-draped bayou. Rose was supposed to have been a beautiful octoroon, a secret agent for the Texans, assigned to the mission of diverting the invading commander from his military duties.

Led by Houston on his white stallion, the Texans advanced on foot and on horseback across the primrose prairie. Their flag was a white silk square bearing a painted figure of the Goddess of Liberty.

Deef Smith rode up beside Houston, shouting: "Fight for your lives, boys! Vince's Bridge is down!" This didn't faze the Harrisburg boys, who knew that anybody traveling west in a hurry could head Vince's Bayou or cross it without a bridge. But the others supposed that Houston had boxed both forces in with two bayous, a river and a bay.

A fifer and a drummer started playing an old English lovesong, "Will You Come to the Bower," in fast march tempo. A local radio station sometimes plays a variation of the song's main theme as a signature.

Houston rode across the line of march. "Hold your fire, Men!" he commanded, drawing his sword. "But when you get a bead on a target, remember—" His blade flashed in the Texas sunshine — "remember the Alamo!"

Who could forget? To the last man, Buck Travis' garrison in the mission fort at San Antonio de Bexar had died fighting!

"Remember Goliad!" shouted a soldier who had lost a brother in the Palm Sunday slaughter of Jim Fannin's command.

And, remembering both of those heartbreaking massacres, screaming their names, the Texans began to charge. A bugle wailed behind the enemy's works, and the invaders began waking from their siesta and firing off their muskets. The Texans paused only to draw a bead and fire. They reloaded on the run, stopped to fire again, then charged on, cursing the first dictator to set foot in the Americas.

For the invaders, the Battle of San Jacinto was just 18 minutes of hell with the bark off. For Texas, it was to be, for all time, her finest hour. Houston's official account of the battle says the Texans lost two men killed and 23 wounded, six fatally. Houston himself was severely wounded.

The enemy lost 630 killed and 208 wounded, Houston reported. Among the prisoners was the dictator-president. Texas was a nation as free and proud as the United States herself.

SPACE QUOTES

GEMINI VIII: THE FLIGHT CUT SHORT. FORCED HOMECOMING OF AMERICAN COSMONAUTS, Pravda, March 18, 1966.

The flight of the cosmic ship Gemini VIII, launched yesterday into orbit around the Earth from the Cape Kennedy rocketdrome, was planned to last three days and three nights. According to the schedule, American Cosmonauts Neil Armstrong and David Scott were to have conducted a number of interesting experiments and land in the Atlantic Ocean. But after a few hours stay in the cosmos, the flight was suddenly interrupted, and the ship made a forced landing in the Pacific Ocean. The cosmic control point in the city of Houston gave the command for descent after a dangerous malfunction was found in the control system of Gemini VIII . . .

After the docking and separation of Gemini VIII, the Agena had to be brought out to a "stand-by orbit" by remote command to 300 miles from the Earth and will travel in this orbit for three or four months until the expected start of the cosmic ship Gemini X. It is supposed that the Agena will be returned to the orbit of Gemini X and a number of experiments conducted. From a press conference came the message that Armstrong and Scott would be in Okinawa in two days, and then return to the USA. They shall appear at a press conference and talk about their flight.

In Washington, Vice President Humphrey told correspondents that the American cosmonauts Armstrong and Scott "were exposed to serious danger."

I feel compelled to write . . .

The following are excerpts from letters received at MSC in which the writers comment upon the Gemini VIII mission:

Carlinville, Ill.
I am not normally given to writing letters to people I do not know. But I feel compelled to write you after viewing the press conference following the aborted Gemini VIII mission.

I would like to congratulate you and your associates on your conduct at these press conferences. I wish I could also congratulate the press. But as a private citizen, I was frankly angry and appalled at their conduct. I appreciate their efforts to get news, but it seems it was perfectly obvious that you were in no position to answer accurately the questions they persisted in asking . . .

I feel the press was grossly unfair in their speculation of "panic"—unfair to you at Houston Control, to the astronauts and certainly to the families of the men who were putting in many anxious hours while they waited for the word that their men were safe.

It would seem that those of you involved with the flight, (who were rather openly accused of withholding information) were more honestly concerned with the fate of the mission, and of the men, than were the newshawks who insisted on picking up crumbs where none had fallen . . .

Mrs. R. R.

Deerfield Beach, Fla.
It has been a tremendous experience watching the many successful ventures into space, and more than once I was a nervous wreck. However, yesterday's venture and as far as I'm concerned the successful docking, no matter what happened later, was stupendous. I thank you all for being so extraordinary patient with the press. One would almost think from the questions that these gentlemen and ladies knew as much about your work as they do their own. I might add, they could derive much by watching a rerun of the two press conferences and learning a lesson in seeing how tired and drawn looking you all were last night, and how your patience must have been strained. Thank you for giving us a chance to thank for ourselves. Thank you for belonging to us. It is good to be able to sort of do our own thinking about things, even if we do not thoroughly understand it, sort of shakes the lazy cobwebs out of our heads. I wish I could read a newspaper and try to be as self-thinking and unbiased as I once used to be able to. However, it seems these people interpret everything printable or TVable.

Mrs. M. T.

Smithfield, Texas
I have been watching and listening to the press conference you have been conducting. Having already been impressed with the very patient, diplomatic way in which you have been answering the not-always-polite questions from various reporters, I just thought someone ought to tell you that someone thinks you and NASA made the right decision in "withholding the tapes." It seems a shame that our journalists are so anxious for sensational blame or that is, some of our journalists. Anyway, as just plain Mrs. John Q. Citizen I think you've done a marvelous job—a truly scientific presentation. How glad we should all be to have such men at the head of our Gemini missions.

Mrs. C. G.

Pembroke, Bermuda
I have just finished listening to the press conference from Houston concerning the Gemini VIII flight. First of all, may I say that NASA's fantastic accomplishments leave me speechless and terribly proud. The amazing teamwork behind the United States' space feats is never more evident than in time of crises (particularly in the calm voices on the tapes) and I, for one salute you all.

However, above and beyond the praise due you for the space successes, I feel you should get an Endurance Medal of your own for Infinite Patience in the face of the press. I am continually astounded at these Sunday-morning quarterbacks who have the incredible gall to attempt to out-think, outsmart and outrage all of you very patient and very brilliant gentlemen connected with the space program. One reporter in particular today persisted in picking at the fact that he didn't hear the tapes immediately and mumbled something about "a lousy decision" . . .

etc., ad nauseum. I've noticed this peculiar tendency to display bad manners and ignorance in previous press conferences and finally today did it!

I salute you all for your patience and wisdom!

Mrs. M. L. H.

Austin, Texas
On Thursday afternoon I listened to a press conference from Houston when members of the press asked you many questions about Gemini VIII, including what happened to cause it to have to be brought to Earth prior to the scheduled time. Perhaps it was my imagination, but it seemed that certain members of the press were slightly critical of you and others associated with NASA (including our two astronauts as well) and, frankly, I was appalled at some of their demanding and rude questions and comments. I am referring particularly to the gentlemen of the press who kept asking why the delay in your decision to wait several hours before turning the information contained in the tapes over to the press and his final comment was that he wanted to be on record as saying that in his opinion (and I quote), "It was a lousy decision."

Mr. J. C. L.

Birmingham, Ala.
People I have talked to are somewhat resentful of the press in subjecting you and your staff to such a premature, unnecessary and burdensome grilling as the one last night. You all looked and must well have been extremely tired and showed amazing patience far beyond the call of duty.

I am sure the burden of your task and the tremendous sense of responsibility you must endure are not lightened nor the success of the project aided by such premature and laborious press of the press.

I suggest press conferences be postponed until all the staff has had a good night of sleep.

Mr. R. H. B.

San Francisco, Calif.
You are to be congratulated on the outward calm exhibited by yourself and staff while under cross-examination by the panel of reporters, some apparently striving to impress the viewing public that they were space technology experts.

With the exception of a few top-notch reporters, many others made a poor showing for themselves with redundant questioning and complaint that information was being withheld, regardless of being told over and over again that factual information was not yet available. It was hard to understand why some of these reporters could not accept the instant facts.

The public, I believe, is quite well satisfied with the success of NASA efforts, and, of course react with natural disappointment and concern when trouble is experienced or life is endangered. I doubt that many are capable of understanding computer loading codes, fuel and oxidizer quantities together with a host of other technical aspects which should be strictly flight testing data.

Throughout the news conferences, we did not hear a single word of praise for the combined efforts and techniques used to achieve the perfect reentry into the emergency area, made possible only by thorough painstaking pre-planning for such contingencies.

Again, congratulations. A good engineer does not panic before eager minded journalists trying to accomplish speculative news.

Mr. W. E. N.

Torrington, Conn.
Compliments to all of you for your endless patience in answering the repetitious questions of the reporters! You all looked exhausted at the midnight (here) conference and were still able to be civil and polite. The reporters were almost belligerent at times and I couldn't keep from wondering if they hadn't learned a few of your "terms" and were trying to impress their editors.

Just knowing the two astronauts were safe was enough for most people—we could wait for the "why" for weeks.

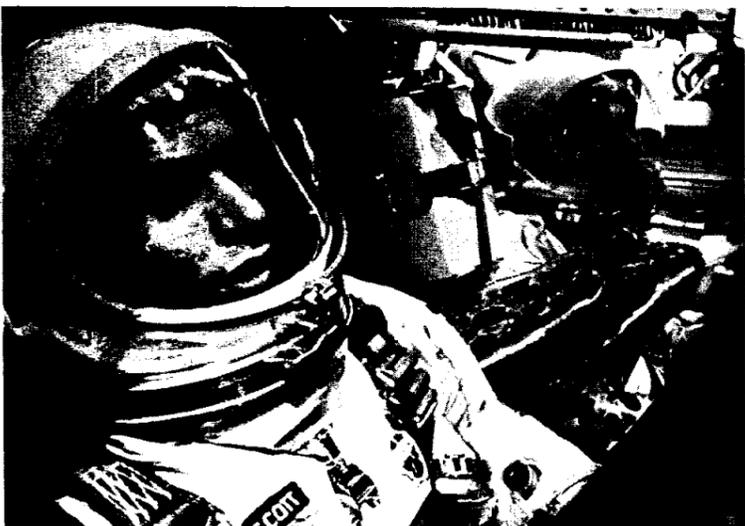
Again, compliments to all of you for your courtesy and patience under trying conditions. I was a very

Interested Watcher.

The SPACE NEWS ROUNDUP, an official publication of the Manned Spacecraft Center, National Aeronautics and Space Administration, Houston, Texas, is published for MSC personnel by the Public Affairs Office.

Director Dr. Robert R. Gilruth
Public Affairs Officer Paul Haney
Editor Terry White
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On The Lighter Side

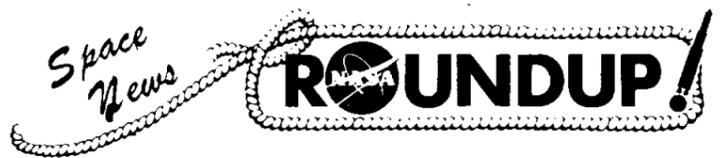


Houston CapCom, Gemini Eight. Like to report that the frog egg experiment worked great.

Spring, When a Young Lady's Fancy



SPRING STYLES—Members of the MSC Charm Club are shown in some of the threads they modeled during the March 8 "Blast Into Spring" style show at the Kings Inn. Seated are Mary Ann Kelly and Barbara Corwin. Standing, left to right, are Doris Reid, Carol Daunt, Suellyn Johnson, Wanda Slack, Judi Liles, Bea Anderson and Jan Shrum.



MANNED SPACECRAFT CENTER, HOUSTON, TEXAS

EMPLOYEE NEWS

MSC BOWLING ROUNDUP

MSC 5 O'CLOCK MONDAY MIXED LEAGUE			MIMOSA MEN'S LEAGUE	
TEAM	WON	LOST	TEAM	WON LOST
Pacesetters	55½	40½	Chizzlers	17 3
Pot Shots	55½	40½	Whirlwinds	14 6
Hi-Hopes	47	49	Technics	11 9
Thirds	45½	50½	Alley Oops	11 9
McH's	43½	52½	Foul Five	11 9
Bombers	41	55	Agitators	10 10
			Goobers	8 12
			Fabricators	7 13
			Road Runners	7 13
			Green Giants	4 16

High Game Women: Tommie Bordeaux 194, Pat Little 193.
 High Game Men: E. Ray Walker 246, William Kutalek 228.
 High Series Women: Pat Little 485, Gale Mauney 483.
 High Series Men: Harley Erickson 604, E. Ray Walker 590.

High Game: B. Graham 273, G. Amason 266.
 High Series: G. Amason 701, B. Harris 701.
 High Team Game: Whirlwinds 1108, Alley Oops 1105.
 High Team Series: Chizzlers 3138, Technics 3108.

Roundup Swap-Shop

(Deadline for classified ads is the Friday preceding Roundup publication date. Ads received after the deadline will be run in the next following issue. Send ads in writing to Roundup Editor, AP3. Ads will not be repeated unless requested.)

FOR SALE

- Trumpet and saxophone in fair condition. Make offer. Dale Nussman, HU 3-4473.
- 32-foot ChrisCraft cruiser. Sleeps 6, new upholstery, rebuilt engines and hull. Stall 36 Lakeside Boat Storage, NASA Road 1. Asking \$4,000. Henry Fancher, 877-1379.
- Curtis-Mathes 30-watt stereo amplifier, \$30. Arminta Yanez, WI 5-9832.
- 14-foot Crestliner fiberglass boat w/35-hp Mercury motor and Gator trailer. Like new. Stanley Snipes, NB 591-2116.
- International postage stamp collection. Scott's albums Book I and II. Asking \$350. Make offer. Ben Locher, GR 1-4387.
- 110-volt 10,000 BTU air conditioner in fair condition. Dale Nussman, HU 3-4473.
- 3-bedroom, 2-bath 2000 ft. house in Swan Lagoon. Central heat and air-conditioning, landscaped. \$22,500. Dr. Howard Minners, 932-2417.
- Corner-lot traditional style house, 3-2-2, separate dining, electric built-in kitchen, utility room, custom drapes, carpeted, covered patio, lawn in. Equity-assume VA loan. Charles Pace, GA 1-2696.
- 1964 VW convertible. Many extras. \$1600. J. W. O'Donnell, 877-1746.
- 1961 Buick Special station wagon, 39,700 miles, new btry, luggage rack, no air, good cond. Original owner. R. A. Gardiner, HU 2-7182.
- 1957 Corvette R&H, dual 4-brl carbs, dual-point ignition, auto trnsm, HD drive train. R.A. Hoover, 877-3366 after 7:30 pm.
- 1953 Studebaker \$50; 1937 Chevy \$50. Tom Gallagher, HU 7-0149.
- 1958 Buick Special hardtop, auto trnsm, new paint and tires, 56,000 miles. HU 4-3809.
- 1962 Chevy ½-ton pickup, long wheel base, air cond and custom cab-over camper. Ed Stelly, 932-4727.

RIDER POOLS

- Freeway Manor to Bldg. 4, 7:30 to 4. Dale Nussman, HU 3-4473.
- Bayport area. Need ride Tues and Thurs 7:30-4 shift. Will pay for ride or take turn driving. Ben Locher, GR 1-4387.
- Ride or driving combination from Bayview/Baycliff for 8:30 shift. J. Norris, 966-2074.

WANTED

- Good home for year-old male Labrador Retriever. Marina Evans, HA 4-2155.

Hjornevik Addresses Accountants Meeting

Wesley L. Hjornevik, MSC Assistant Director for Administration, will address the Houston Chapter of the Federal Government Accountants Association April 19. Hjornevik's topic will be space-age management problems.

The dinner meeting will be in the Texian Room at Bill Bennett's Restaurant in Houston starting with a social hour at 5:45 pm.

MSC employees interested in attending the meeting can make reservations through Ralph Rhodes 7771 before noon April 18.

Annual Spring Dance Scheduled for April 15

The third annual MSC Spring Dance will be held Friday April 15 at the Wilbur Clark Crest Hotel. Tickets are \$2.50 per person and include set-ups and breakfast.

The semi-formal dance will run from 8 pm to midnight. Tickets are available from EAA District Representatives or from Becky Long 3761, Bldg. 2, Rm. 130.

Lunarfins Trek To Mid-Texas Diving Locations

A six-weeks course to qualify swimmers in lake, Gulf ocean diving was begun March 28 by the MSC Lunarfins scuba diving club. Technical instruction is given each Monday at Ellington AFB, and indoor pool practice is conducted each Tuesday at the Tropicana Swim Club in Houston.

Several Lunarfins members spent a weekend last month camping in Willow Park and diving in the Lakes and rivers in the San Marcos and New Braunfels area of Central Texas. They reported good conditions with 20-foot visibility 65 feet below the lake surface and 50 feet visibility in the 71° spring waters. Interesting underwater scenery was provided by an abundance of plant growth.

The next Lunarfins outing will be this weekend's family camping and diving trip to Canyon Lake near New Braunfels, where waters are reported to be more than 100 feet deep.

Toastmasters Install New Officers April 6

The MSC Toastmaster Club next Wednesday will install new officers at a meeting to be held at the Kings Inn at 6 pm.

New officers are Ernie Gillam, president; Dick Crane, educational vice president; Tony Verrengia, administrative vice president; Fred Burns, secretary; Bill Jones, treasurer; and Steve Whitson, sergeant-at-arms.

Tops in Mixed Bowlers



SET THE PACE—The Pacesetters lived up to their name by taking first place in the MSC 5 O'Clock Monday Mixed Bowling League with 59½ wins and 40½ losses for a percentage of .595. Final playoff was held March 28. Second place team in the League was the Potshots, with 57½ won, 40½ lost for .575 per cent. Left to right, Pacesetters are Bill Kutalek, Sharon Brennan, Curley Dartez and Flo Miranda.

1966 MSC/Ellington AFB Volleyball League

American Division		National Division	
1. G&C	5. ASPO	9. 2578th	13. Coast Guard
2. NAA	6. IBM (1)	10. FSD	14. FCD (1)
3. CSD	7. FCD (11)	11. MPAD	15. IESD (B)
4. IESD (A)	8. GE	12. Link	16. IBM (2)

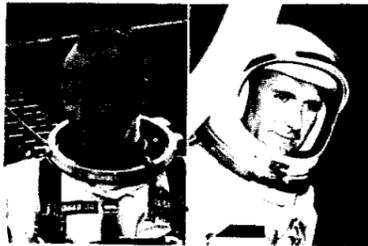
League games April 4-14; teams listed by numbers assigned above:

6:30	April 4	April 5	April 6	April 7
8:00 pm	14 vs 9	15 vs 13	16 vs 12	10 vs 11
	7 vs 5	2 vs 3	8 vs 4	6 vs 1
	April 11	April 12	April 13	April 14
6:30 pm	1 vs 3	5 vs 8	6 vs 7	4 vs 2
8:00 pm	9 vs 11	12 vs 10	14 vs 15	13 vs 16

Space News **ROUNDUP!**
SECOND FRONT PAGE

Flight Crew Announced For Gemini XI Mission

Prime and backup crews for the Gemini XI mission were named last week at the same time as the announcement of the crew for the first manned Apollo mission. Prime crew is Charles "Pete" Conrad, Jr. command pilot, and Richard F. Gordon, Jr. pilot. Backups are Neil A. Armstrong, command pilot and William A. Anders, pilot.



Charles Conrad Richard Gordon



Neil Armstrong William Anders

Conrad was pilot on Gemini V and Armstrong was command pilot on Gemini VIII. Gordon was Gemini VII backup pilot and Anders has not had previous a crew assignment.

As presently planned, Gemini XI will be a rendezvous and docking flight of up to three days duration. Rendezvous is scheduled in the first revolution, with the flight crew using onboard systems to compute their own trajectories and maneuvers. Ground systems will serve as backup.

Re-rendezvous using onboard systems will be done with the Gemini XI Agena vehicle acting as a passive target in the second rendezvous.

EVA, using a hand-held maneuvering unit similar to the one which would have been used in Gemini VIII, is planned for the mission. EVA duration and

tasks will depend upon experience of Gemini IX and X EVA.

Eight experiments are tentatively scheduled for Gemini XI, all of which are repeats of previously-flown experiments. A specific list of experiments is pending reevaluation.

Gemini XI's launch profile and orbital ephemeris will be essentially the same as those of Gemini VIII. The Agena vehicle will be launched into a 161 nm circular orbit for rendezvous, and later placed into a higher orbit for possible use during Gemini XII.

Arnold Society Honors Berry, White, McDivitt

Three MSC employees this month will receive high awards by the Arnold Air Society at its annual convention in Dallas.

Scheduled to receive two of the society's outstanding awards are Dr. Charles A. Berry, chief of center medical programs and astronauts Edward H. White and James A. McDivitt. Berry will receive the General Hoyt S. Vanderberg trophy for "outstanding scientific contributions to aerospace development in the field of science" and White and McDivitt will share the John Fitzgerald Kennedy trophy for outstanding contributions to aerospace flight.

The selection of White and McDivitt, the crew of Gemini IV, marks the second time in the history of the Kennedy award that it has been claimed by an astronaut. Gordon Cooper was presented the award in 1964 following his 34-hour Mercury flight.

The trophy and citations will be presented at the Society's awards banquet April 6 at the Statler-Hilton Hotel, Dallas. Guest speaker at the banquet will be General John P. McConnell, chief of staff of the U.S. Air Force. More than 1,800 Air Force ROTC cadets representing 170 colleges and universities will be present for the event.

STAR-SPANGLED SAVINGS PLAN FOR ALL AMERICANS U.S. SAVINGS BONDS

Talk About Simultaneous Launches . .



SALVO LIFTOFF—Well, not really, but an imaginative Air Force photographer left his camera boresighted for both the Atlas/Agena launch and the Gemini VIII launch 101 minutes later and made this double-exposure photo which makes it appear that the launch corridor might get a bit crowded.

NASA Selects Bendix To Build Lunar Package

NASA has selected Bendix Systems Division, Bendix Corp., Ann Arbor, Mich., for negotiation on a contract to manufacture four Apollo Lunar Surface Experiments packages (ALSEP).

Estimated cost of the work under a cost-plus-incentive-fee agreement is approximately \$17 million.

The packages, each weighing about 170 pounds, will contain scientific instruments to measure the Moon's surface characteristics and atmosphere. One package will be carried to the Moon in the Lunar Excursion Module on each of the initial Apollo lunar landing missions. Astronauts will place the instrumentation on the Moon.

After the crew leaves the lunar surface the instruments will transmit data back to Earth for six months to one year.

Seven geophysical experiments for the ALSEP selected by NASA in January are: passive and active lunar seismic experiments, lunar tri-axis magnetometer, medium and low energy solar wind experiments, suprathermal ion detector and lunar heat flow measurements.

Bendix Systems Division was one of three firms selected by NASA in August 1965 for ALSEP design studies under separate \$500,000 fixed-price contracts.

The contract for ALSEP production will be managed by MSC.

Backup Crews Shuffled For Gemini IX and X

Gemini X backup crewmen James A. Lovell and Edwin E. "Buzz" Aldrin, Jr. have been reassigned as backup crew for Gemini IX. The original Gemini IX backups, Thomas P. Stafford and Eugene Cernan, became prime crew following the deaths in a St. Louis aircraft crash of Elliot M. See, Jr. and Charles A. Bassett II on February 28, 1966.

New Gemini X backup crewmen are Alan L. Bean and Clifton C. Williams, Jr.

AFGE Meets April 11

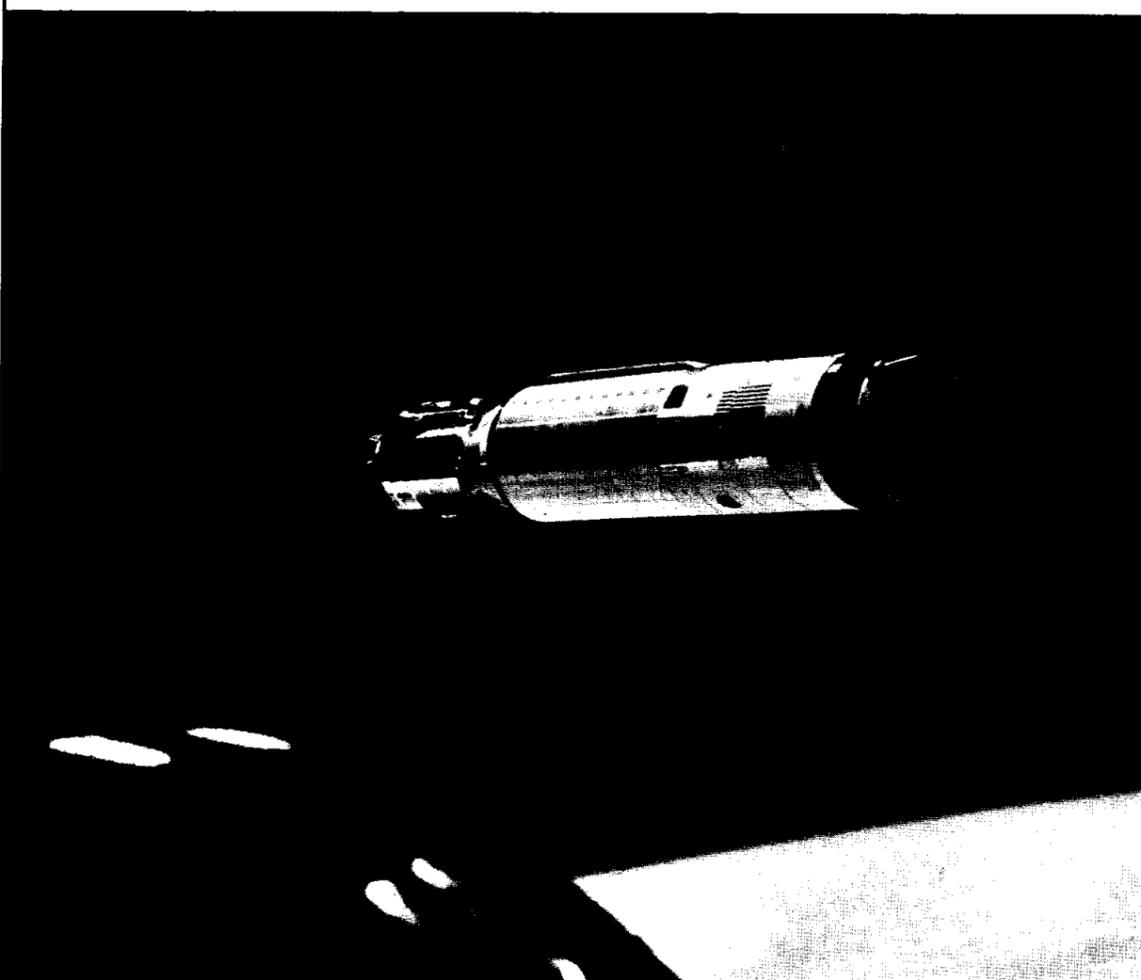
The American Federation of Government Employees, Lodge 2284, will hold its regular monthly meeting on April 11 at the Webster State Bank beginning at 5:00 p.m. Members are urged to attend, prospective members and interested persons are invited.

Business to be conducted at this meeting is passing on the amendment to the by-laws, nomination of officers, and discussion of the new contract awarding formal recognition to the Wage Board employees.

Flyers Pick Officers

The MSC Aero Club will hold its annual election of officers at the April 12 meeting in the MSC News Center (Nassau Bay Bldg. 6) at 5:30 pm. All Aero Club members are urged to attend.

Orbital Tête à Tête



KEEPING AN APPOINTMENT—The Agena rendezvous vehicle sits stable and waiting as Gemini VIII approaches the docking phase at 160 nm altitude. Docking was accomplished as smoothly as if it were done on the MSC Translation and Docking Simulator.